



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,839	08/23/2001	Osamu Tanaka	NC0002-US/OH	8501

466 7590 06/19/2003

YOUNG & THOMPSON  
745 SOUTH 23RD STREET 2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

DICUS, TAMRA

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/934,839

Applicant(s)

TANAKA ET AL.

Examiner

Tamra L. Dicus

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Response to Amendment*

The 112 rejections of the prior Office Action is withdrawn.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 14-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. An additional adhesive layer and water absorbent material critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. This new matter will not be examined.

3. Claims 14, 15, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A separating material layer is not defined in the specification as to what this layer is composed of.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,110,574 to Ochi et al. in view of USPN 6,416,911 to Mehta et al.

Ochi teaches a retroreflective sheeting comprising a retroreflective base having a light-incident layer on the light-incident side thereof and a fluorine-containing resin film having a total light transmittance of 80% or more, laminated on light-incident layer on contact with an adhesive layer (claims 1 and 13) or a pressure-sensitive adhesive (PSA) layer (claim 17) at col. 5, lines 42-43. The fluorine-contained resin film is present of the base on the light-incident side. See col. 2, lines 45-col. 3, lines 21 and col. 5, lines 20-32. Ochi does not teach the printed discontinuous parts between the film and adhesive. However, Mehta teaches an image bonding treatment of retroreflective surfaces comprising ink and adhesive coatings are printed at col. 5, lines 36-68 and col. 6, lines 1-3, for the purpose of providing information on tags, labels, and signs. Hence, it would have been obvious to one of ordinary skill in the art to modify the retroreflective sheeting of Ochi to provide printing on an adhesive, being between the film and adhesive of Ochi since Mehta teaches ink and adhesive coatings are printed at col. 5, lines 36-68 and col. 6, lines 1-3, for the purpose of providing information on tags, labels, and signs.

Ochi does not provide a printing ink composition as recited in claim 2, however, Mehta teaches has acrylic resin as the binder at col. 4, lines 25-40. Therefore it would have been

Art Unit: 1774

obvious to one of ordinary skill in the art to modify the sheeting of Ochi to include acrylic resin since Mehta teaches such a resin provides improvement of the bond between the ink and substrate at col. 4, lines 40-45.

Ochi does not teach printing in a spaced apart fashion as in claim 3, however, Mehta teaches at col. 1, lines 45-65 printing in a repetitive fashion (equivalent to language of claim 3), is known in order to provide information for a series of labels. Hence, it would have been obvious to one of ordinary skill in the art to modify the sheeting of Ochi to provide printed information in a spaced apart fashion to provide information for a series of labels as Mehta teaches at col. 1, lines 45-65.

Ochi does not teach the printing process effected conditions e.g. printing length of the printed parts as recited in claims 4 and 5 or the printed layer total area of 80% or less (claim 6), however, such variations of length and percent area of print are optimizable. It would have been obvious to one of ordinary skill in the art to modify the sheeting of Ochi to vary length and % area since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The spacings and area are effected by the process conditions of the machine, e.g. time and speed.

Regarding the surface tension of 31 dynes/cm (claim 7), such a property is inherent as the same materials are provided.

The examiner has established a *prima facie* case of obviousness and has provided evidentiary support thereof for the rejection under 35 U.S.C. 103(a).

Art Unit: 1774

5. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable USPN 6,110,574 to Ochi et al. as applied to claim 13 above, in view of USPN 6,416,911 to Mehta et al. and further in view of USPN 5,376,431 to Rowland.

6. Ochi essentially describes the claimed invention. Ochi does not disclose a separating material layer, an additional adhesive or support layer as in claims 14-15. However, Mehta describes a binder layer (14) (additional adhesive and binder layer (claims 14 and 15), where glass microspheres 12 (beads) are embedded in 14 and under 12 is a reflective layer 16 (claim 14) at col. 5, lines 51-68 where the support layer 16 contacts 14, a release liner may be adjacent to the PSA layer, serving as a separating material (meeting claim 15). Hence it would have been obvious to one of ordinary skill in the art to modify the sheet of Ochi to further include the layers and structure of claims 14 and 15 since Mehta teaches this embodiment is a typical construction in Figure 1.

7. Ochi does not describe another prism layer in claim 14. However, Rowland teaches a prism adjacent to a reflective sheet, however, Rowland teaches this combination at col. 3, lines 15-25 for producing a material having bright whiter appearance in daylight and night as taught by Rowland in the abstract and in Example Two. It would have been obvious to one of ordinary skill in the art to modify the sheet of Ochi to further include a prism adjacent to a reflective sheet for the purpose of producing a material having bright whiter appearance in daylight and night as taught by Rowland in the abstract and in Example Two.

8. Ochi does not teach the printing process effected conditions e.g. printing length of the printed parts as recited in claims 17, 19, and 20 or the printed layer total area of 80% or less, claim 13, however, such variations of length and percent area of print are optimizable. It would

Art Unit: 1774

have been obvious to one of ordinary skill in the art to modify the sheeting of Ochi to vary length and % area since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The spacings and area are effected by the process conditions of the machine, e.g. time and speed.

9. Regarding the surface tension of 31 dynes/cm, such a property is inherent as the same materials are provided.

### ***Response to Arguments***

Applicant contends that Mehta does not teach adhesive in between the fluorine layer and the retroreflective layer. The Examiner does not agree. Mehta specifically teaches this very structure. At col. 8, lines 55-60, Mehta explains how the cover layer is made of a fluorine-containing resin. At col. 6, lines 40-45, adhesives MMA and vinylidene fluoride is between the cover and retroreflective layers. Mehta explains the printing layer can be provide on both surfaces of the cover layer at col. 12, lines 9-11. Therefore, Mehta's description of his film and structure is equivalent to "a printed layer made of discontinuous parts is provided between said fluorine-containing film and adhesive". Different reasons for applying adhesive and printing in this structure is irrelevant.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

Art Unit: 1774

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8329 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tamra L. Dicus  
Examiner  
Art Unit 1774

June 16, 2003

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

